

REMARKS

In the outstanding *Office Action*, restriction to one of the following inventions was required under 35 United States Code § 121:

I. Claims 1-17, 30 and 31, drawn to a fuel container, classified in class 220, subclass 562; and

II. Claims 18-29, drawn method of making by blow molding, classified in class 264, subclass 500.

III. Claim 29, drawn to a method of making by co-injection molding, classified in class 264, subclass unknown.

Applicant elects the invention of Group I, with traverse, for the following reasons.

In order to restrict the inventions of Groups I, II, and III the process of making and a product made by the process can be shown to be distinct inventions if either or both of the following can be shown: (A) that the process as claimed is not an obvious process of making the product and the process as claimed can be used to make another materially different product; or (B) that the product as claimed can be made by another materially different process. (MPEP §806.05(f)). This is of course but half the test. Restriction is proper if the above test is met and there would be a serious burden on the Examiner if the restriction was not required. (MPEP §803.01). In this case, process claims 18-28 and 29, as amended, contain the limitations of Claim 1, and accordingly, rejoinder is proper upon allowance of Claim 1. (MPEP §821.04(b)).

The Examiner objected to claims 30 and 31 as being incomplete. Applicant has amended claims 30 and 31 by deleting the number 38 and inserting the number 29, correcting an obvious typographical error.

Claims 1-17 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner pointed to the presence of an “optional” limitation making the claim unclear as the metes and bounds of the claim cannot be determined since it is not known whether the limitation is part of the claim or not. This rejection is respectfully traversed. The inclusion of “optionally” for optional features is standard practice. The metes and bounds of claims 1-17 are not rendered unclear merely because of the presence of the alternative language. *See Ex parte Wu*, 10 USPQ2d 2031, 2032 (B.P.A.I. 1989); *Ex parte Cordova*, 10 USPQ2d 1949, 1950 (B.P.A.I. 1989). It is only where the list of potential alternatives can vary and ambiguity arises, then it is proper to make a rejection under 35 U.S.C. §112, second paragraph (MPEP §2173.05(h)III); that is not the case here.

Similar to *Ex parte Cordova*, where the recitation “optionally” denoted that the unsaturated aliphatic carboxylic acid may or may not be employed, here the recitation of “optionally” denotes that mechanical linking may or may not be employed. *Ex parte Cordova*, 10 USPQ2d 1949, 1950. Therefore, the use of the alternative expression “optionally” in the rejected claims does not obfuscate the subject matter. Furthermore, the pending dependent claims 2 and 3 resolve any possible ambiguity in this case since they specify that the copular regions are present and recite their relative area. Under the doctrine of claim differentiation, clearly claim 1 is broader. *See e.g., Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004) (the doctrine is at its strongest “where the limitation sought to be ‘read into’ an independent claim already appears in a dependent claim”); *Karlin Tech. Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971-72 (Fed. Cir. 1999) (“The doctrine of claim differentiation stems from “the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.”).

The claims were also rejected under 35 U.S.C. § 103(a) over prior art. The Examiner states that United States Patent No. 6,453,885 to W. T. Short (*Short*) discloses a fuel container comprising an inner barrier layer **34** in intimate unbonded surface-to-surface contact with an outer polyolefin layer **30** (*See FIG. 2*, reproduced below) and that *Short* discloses the invention except for the inner layer being polyacetal and the capacity being 5 gal. or less. United States

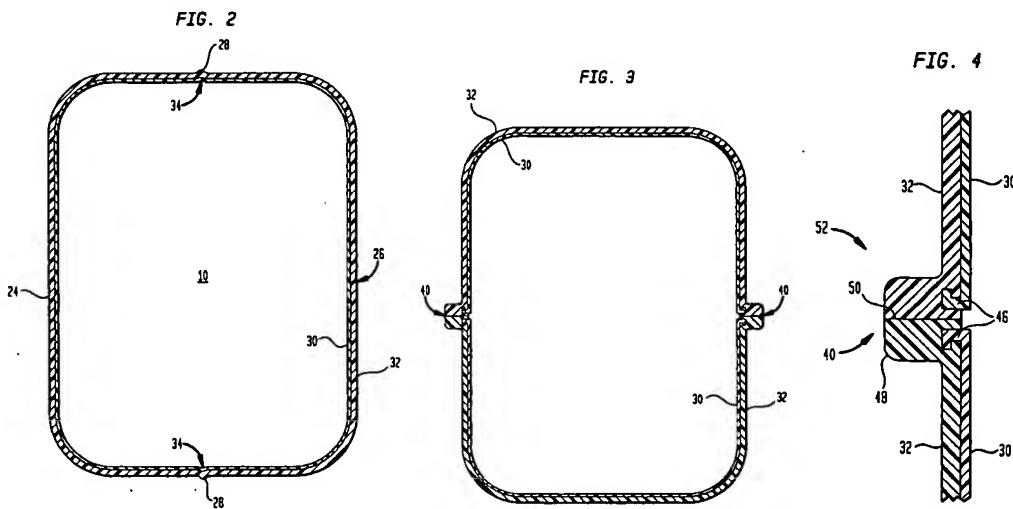
Patent Application Publication by 6,260,544 by D. G. McLeod (*McLeod*) is then cited as disclosing a polyacetal layer. Citing *Short*, *McLeod*, and United States Patent No. 6,260544 to Spry et al. (*Spry et al.*) the Examiner stated:

- 1) It would have been obvious to modify the inner layer to be polyacetal because Short specifically seeks a layer resistant to fuel permeation as stated in col. 3, lines 20-21 and *McLeod* specifically provides an inner layer of polyacetal particularly for its fuel barrier property as stated in paragraph 26;
- 2) It would have been obvious to reduce the size of a fuel tank to the size of 5 gal. or less and even 1 quart of less as a matter of design choice in sizing the tank to the apparatus being fueled for the reason of reducing weight and bulk (dimensional) size by reducing the volume of fuel and the dimensions of the fuel tank and to promote safety as the total amount of fuel is decreased. These fuel capacities are generally known for reserve tanks, model air planes, and small engine lawn machines such as gas string trimmers;
- 3) The dimensional limitations of claims 8 and 11-14 are disclosed by Short;
- 4) Re Claims 5 and 6 official notice was taken concerning the compositions of polyacetal copolymer of trioxane and ethylene oxide and polyacetal copolymer of trioxane and 1,3-dioxolane are well known polyacetal copolymers. It would have been obvious to modify the polyacetal copolymer to be one of the two mentioned above in order to make the container from a readily available resin rather than a less available resin; and
- 5) Re claims 9 and 10, it would have been obvious as a matter of design choice to modify the thickness within the ranges of the claims as a reduction reduces the weight of the container and reduces the cost of the resin used to make the container.

Claims 1, 18, and 29 have been amended to include a “substantially continuous surface-to-surface contact” recitation as shown in claim 1, reproduced below:

A fuel container comprising an inner barrier layer of polyacetal resin in intimate unbonded, and substantially continuous surface-to-surface contact with an outer polyolefin layer operative to absorb impact and distribute an applied force, the two layers optionally being mechanically linked at one or more copular regions, but being otherwise capable of independent local displacement with respect to each other, wherein the fuel container has a capacity of about 5 gallons or less.

“Substantial continuous” surface-to-surface finds support in paragraph 54 of the application, “The layers [30 and 32] are in contiguous surface-to-surface unbonded contact as shown [FIG. 2]...” (below). Additionally, support for the intimate unbonded, and “substantially continuous” surface-to-surface contact between layers 32 and 34 is present in FIG. 3 and FIG. 4 (below).

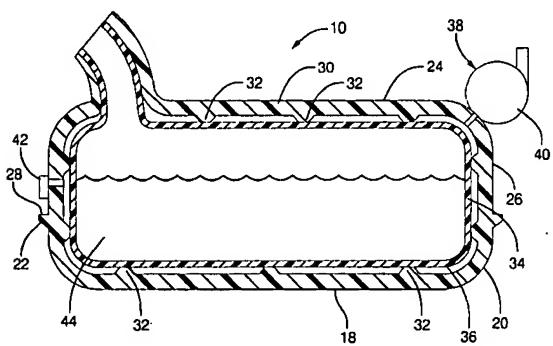


An Applicant may show possession of an invention by disclosure of drawings or structural chemical formulas that are sufficiently detailed to show that applicant was in possession of the claimed invention as a whole. *See, e.g., Koito Manufacturing Co. v. Turn-Key-Tech LLC*, 72 USPQ2d 1190, 1199 (Fed. Cir. 2004) (“[w]e thus affirm the district court’s determination that, as a matter of law, the limitation ‘significantly thicker and wider’ finds adequate support in Figure 1 of the written description of the patent.”); *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d at 1565, 19 USPQ2d at 1118 (Fed. Cir. 1991) (“drawings alone may provide a written description’

of an invention as required by Sec. 112*”); *In re Wolfensperger*, 302 F.2d 950, 133 USPQ 537 (CCPA 1962) (the drawings of Applicant’s specification provided sufficient written descriptive support for the claim limitation at issue); *Autogiro Co. of America v. United States*, 384 F.2d 391, 398, 155 USPQ 697, 703 (Ct. Cl. 1967) (“In those instances where a visual representation can flesh out words, drawings may be used in the same manner and with the same limitations as the specification.”).

Applicant’s invention is a fuel container where an inner barrier layer 30 and outer polyolefin layer 32 (*See FIGS. 2, 3 and 4 above*) are in intimate surface-to-surface, and substantially continuous unbonded contact. This arrangement allows for the dissipation of a force applied to the more crystalline outer layer by readily transferring it to the more flexible inner layer. Additionally, there is no need for a ventilation system because there is no space between the intimate surface-to-surface, and substantially continuous unbonded inner and outer layers. The art does not even remotely suggest the invention as now claimed.

The dual walled plastic fuel tank with an inner fuel containment liner, a vapor purge system and a vapor recovery system disclosed by *Short* teaches a spaced facing relationship



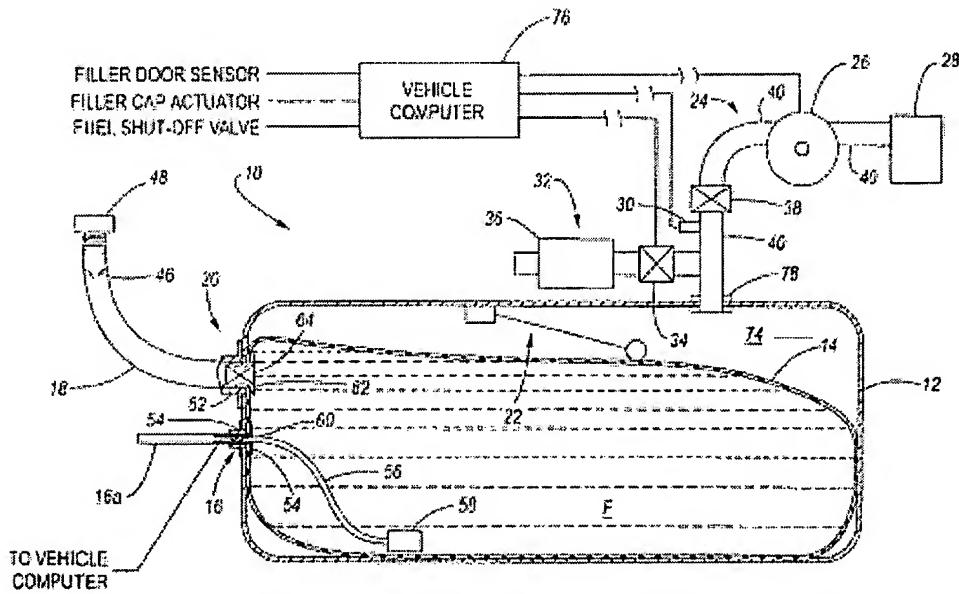
between layers 30 and 34 by employing a plurality of separators 32 (Col. 3, line 2; *See FIG. 2, reproduced left*). Separators 32 are a necessary feature to *Short*’s invention in order to create a deliberate space to allow circulation of air between the inner secondary layer 30 and outer primary layer 34 of the fuel tank. (Col. 3, lines 4-10).

Short also discloses a vapor removal system, generally indicated at 38 including a “purge pump 40 having one end extending through the primary fuel containment layer 30 and communicating with the air gap 36...” *Short* teaches an air gap between the primary fuel containment layer and the secondary fuel containment layer, without such an air gap 36 the vapor purge and recovery system could not operate as *Short* presented in the ‘885 patent. Therefore, the *Short* patent does not cover inner layer having an intimate unbonded, and substantially continuous surface-to-surface contact with an outer polyolefin layer; in fact, *Short*’s inclusion of an air gap 36 and

vapor purge and recovery system teaches away from an inner layer having intimate unbonded, and substantially continuous surface-to-surface contact with an outer polyolefin layer as claimed by Applicant.

McLeod discloses a polyacetal inner layer and states it would be obvious to modify the inner layer to be polyacetal because *Short* specifically seeks a layer resistant to fuel permeation and *McLeod* specifically provides an inner layer of polyacetal particularly for its fuel barrier property. *McLeod* discloses an adhesive technique for assembling a fuel tank assembly where the plastic fuel tank, the multi-walled tubular body and the fuel transport lines comprise a “three-layer laminate structure having two outer layers of a low energy surface material and a core layer of a polymer having a fuel barrier property.” (Paragraph 21)

Spry et al. discloses low fuel vapor emissions fuel system for a motor vehicle. **FIG. 1** (below) for *Spry et al.* displays a rigid tank 12 and a very flexible fuel bladder 14 located within



the tank. The fuel bladder 14 “is size variable and expands as it is filled with fuel when fuel is added thereto (Col. 3, lines 37-39). Similar to *Short*, accumulating of fuel fumes between the inner and outer layers are eliminated, the invention of *Spry et al.* includes an air pump system 24, including an air pump 26, an air intake filter 28, a pressure transducer 30, an exhaust system 32 with a vent valve 38, and interconnecting air pipes 40, a fill regulator system 42 (see **FIG. 3**), a

grommet 46, a fuel cap 48, was well as a filler door sensor 50 and a filler cap actuator (see FIG. 3).

The Examiner's proposed modification of *Short* in view of *McLeod* changes the principle of operation of *Short* and is unwarranted by the disclosure in any event. As noted above, *Short* teaches an air gap between the primary fuel containment layer and the secondary fuel containment layer, without which the vapor purge and recovery system could not operate as *Short* presented in the '885 patent. Furthermore, *Short* teaches a two layer system without adhesives and there is no mention of a three layer multilayer system or the use of adhesives to bond the layers together as taught in *McLeod*. Modifying the *Short* invention to incorporate the three layer structure of *McLeod* is not warranted by the disclosure and would require to the *Short* system to employ a ventilation system in communication with multiple layers to effectively purge and ventilate both air gaps created; the first air gap between the two low energy surface outer layers and second air gap between inner low energy surface material and the core layer.

Similarly, the Examiner's proposed modification of *Short* in view of *McLeod* in view of *Spry et al.* changes the principle of operation of *Short* and is not warranted by the disclosure. The very flexible bladder 14 is crafted from a very flexible material such as butadiene/acrylonitrile with a tetrafluorethylene-hexafluoropropylene. Polymers such as butadiene/acrylonitrile with a tetrafluorethylene-hexafluoropropylene would not work with Applicant's invention which requires a more rigid polymer, such as polyacetal polymers and copolymers. Additionally, it is likely that higher crystallinity, such as polyacetal polymers, would not allow for the invention disclosed in *Spry et al.* to operate properly as it requires a very flexible bladder.

However, even if the *McLeod* and *Spry et al.* references are combined with *Short*, for the reasons stated above, *Short* in view of *McLeod* in view of *Spry et al.* does not disclose all the elements recited in the amended claims. Specifically, an inner layer having an intimate unbonded and substantially continuous surface-to-surface contact with an outer polyolefin layer. *Short* teaches air gap 36 and separators ("the separators 32 may be in the form of ridges, projections, or channels to allow circulation of air between the primary fuel containment layer 30

and a secondary fuel containment layer 34 ..." (Col. 3, lines 7-10)) allowing for air circulation. Therefore, the combination of *Short* in view of *McLeod* in view of *Spry et al.* fails the third prong of the obviousness test as indicated above.

This *Amendment* is being filed with a *Petition* and fee for a one-month extension of time. If additional extensions or fees are necessary, please consider this a *Petition* therefor and charge any fees to Deposit Account No. 50-0935.

In view of the foregoing amendments, and remarks, this application is believed in condition for allowance. If for any reason the Examiner would like to discuss this case, the Examiner is invited to call at the number listed below.

Respectfully submitted,



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April 5, 2007